30 July 1981

Proposal for the

Critical Collection Problems Committee (CCPC)

Technology Transfer

The Problem

The Soviets have traditionally given high priority and devoted large amounts of resources to the acquisition of Western technology. Their efforts include legal importation through open trade channels and through student, scientific, and technological exchanges and conferences; illegal trade channels that evade export controls; and clandestine acquisition through recruited agents, industrial espionage, and communications intercepts. Legal acquisitions generally have their greatest impact on the broad technological base, and thus affect military technology on a relatively long-term basis. Acquisitions through illegal trade channels frequently have both industrial and military applications and thus are important in the near term. The clandestine acquisitions frequently have immediate value to the military. [redacted] 25X1

The acquisitions that have most directly affected Soviet military development have come from clandestine intelligence collection and illegal trade diversions. These collection activities are driven, first, by the needs of the Soviet military and the defense industrial ministries, and, second, by the needs of the civilian sectors of their industry that support defense production. The overall Soviet clandestine intelligence and illegal trade efforts are centrally directed, highly selective and world-wide in scope. They are closely coordinated with overt acquisitions and legitimate purchases, particularly those efforts under the auspices of the State Committee for Science and Technology (GKNT). Furthermore, legal purchases of Western technology requiring hard currency are closely controlled by the GKNT and highest priority is accorded those meeting the direct or partial needs of Soviet industry for defense purposes. The GKNT also initiates and manages the complex network of international scientific and technical agreements that the USSR maintains with the advanced industrial nations of the world. Soviet efforts in all of these acquisitions--legal and illegal--are extensively supported by the other members of the Warsaw Pact. [redacted] 25X1

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[redacted]

While all appropriate sources and methods available to the Intelligence Community are used to monitor illegal and clandestine transfers of technology, we believe we are able to uncover only a small fraction of those taking place. Thus, although the IC believes that such transfers are both intensive and extensive, we cannot precisely estimate their incidence. [redacted] 25X1

In part this is because the scope and range of clandestine operations used by the hostile intelligence services (HIS) are broad. They include recruited agents, industrial espionage, communications intercepts, and HIS-controlled firms. Our intelligence now indicates that both the Soviet and the Warsaw Pact intelligence services are in the mainstream of the illegal technology trade flow. The HIS have concentrated their efforts in the US, Western Europe, and Japan. US targets include defense contractors, high technology firms, and advanced technology (both classified and unclassified) held by the US Government. [redacted] 25X1

The hostile intelligence services focus their recruitment effort abroad on both Americans and foreign nationals with access to controlled US technology. These targets include officials of foreign governments, foreign firms and subsidiaries of US firms, and international organizations having access to advanced and/or proprietary technology. [redacted] 25X1

Illegal diversions of technology fall into two general categories. One is the illegal diversion of controlled US technology from legitimate trade channels to proscribed destinations. This is done through foreign firms willing to engage in profitable impropriety, agents-in-place in foreign firms or foreign subsidiaries of US firms, communist-owned but locally-chartered firms, and foreign purchasing agents (including arms dealers). The other is in-place diversion, in which legally-acquired technologies are put to illegal end-uses and/or used by unauthorized end-users. Both types of illegal diversions are extremely difficult to detect and monitor. [redacted] 25X1

The USSR has been the dominant force behind illegal trade diversions of Western technology, with Poland and Hungary being the major East European participants. The leading sources of illegally-diverted technology have been located in West Germany, France, and Japan. The principal third-country intermediaries through which US technology has been illegally diverted include West Germany, France, Austria, Switzerland, and Japan. Illegal trade diversions are also reported to have taken place in Belgium, the Netherlands, Spain, South Africa, India, Canada, the UK, and some Middle Eastern and Southeast Asian countries.

25X1 [redacted]

The IC currently receives and disseminates to appropriate departments up to 100 reports each year on suspected illegal trade diversions. Most of these reports do not in and of themsleves provide the details necessary to prove that a violation of US national security export controls has occurred. Diverted equipment and technology includes: computers, micro-electronics, telecommunications devices, guidance and navigation systems, lasers and related optics, acoustic and electrooptical sensors, jet engines, and defense-related production technology. The largest single category of diverted technology has been semi-conductor design and production equipment, with an estimated value in excess of $200 million in the past eight years. This concentration probably reflects Soviet efforts to improve an entire key industry--microelectronics--upon which modern military and industrial systems are increasingly dependent. [redacted] 25X1

The IC has very little firm evidence of illegal in-place diversions of controlled technologies in the USSR, PRC, or East European countries. This situation reflects both the great ease of effecting such diversions in closed societies, and the enormous difficulties of detecting them. [redacted] 25X1

As stated earlier, the clandestine and illegal efforts of the USSR and Warsaw Pact to acquire western technology are supplemented by the overt (and essentially legal) collection activities of Soviet and East European scientists and engineers through participation in academic, commercial, and official S&T exchanges. From the Soviet point of view, this participation provides a cost-effective means of acquiring some valuable information on military-related technologies. Upon closer examination, it appears that these exchanges afford Soviet and Warsaw Pact scientists: (1) access to information on advanced technologies with potential military applications in their emerging or early developmental stages, i.e., prior to their industrial application and security control; and (2) opportunities to acquire sensitive but unclassified DoD technical data--some of which can only be acquired or developed in the United States by highly qualified scientists. [redacted] 25X1

The acquisition and exploitation of western technology--particularly classified and company proprietary technology, both export controlled and uncontrolled--has significantly enhanced Soviet defense and industrial capabilities. Through the selective acquisition of Western technology, the Soviets have realized three basic objectives:

--First, the reduction of risk by following or copying proven Western designs.

--Second, reduction of R&D time and costs by the use of Western designs and technology, including production technology and equipment.

--Third, incorporation of countermeasures early in the Soviet weapons development process through the clandestine acquisition of Western military-related technology during its R&D cycle. (S)

CCPC Initiatives

It is recommended that the CCPC evaluate all source collection against the problem of technology transfer to the Soviet Union and its allies. This would include a determination of current collection posture, identifying the analytical communities key information needs, and defining options for improvements in collection that will address these key information needs.

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